California Environmental Protection Agency
Air Resources Board

California Ambient Dioxin Air Monitoring Program
Site Summary

Crockett

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Site Location:
John Swett High School in central Crockett is one of nine sites chosen for California Ambient Dioxin Air Monitoring Program (CADAMP). The city of Crockett is located in northern Contra Costa County where the Carquinez Bridge (Interstate 80) crosses the Carquinez Strait. The high school is located at 1098 Pomona Street.

Site Approval:
Administrators of the John Swett Unified School District granted the Air Resources Board (ARB) permission to install an ambient air monitoring station on school property in October of 2000.

Monitoring Start Date:
Collection of samples for ambient air quality analysis for CADAMP began in December 2001.

Reason for Choosing Crockett:
Crockett was chosen because of its proximity to high-risk facilities, including potential sources of dioxin, and mobile source emissions. Oil refineries and major oil storage facilities are located in the nearby cities of Rodeo, Hercules, Martinez, and Benicia. Crockett is the location of a major food processing operation and a heavy-rail transfer facility. Crockett is home to two schools, John Swett High School and Carquinez Middle School. The student population of John Swett High School is approximately 650.

Carquinez Middle School, located directly across Pomona Street from the high school, has a student population of 500. Both schools are located approximately one-half mile from Interstate 80, a major source of vehicle emissions. This location is a primary air transport pathway to other populated areas downwind and to tidelands, marshes, and Delta tributaries. Crockett is representative of medium and small towns typical of the northern tier of Contra Costa County.

Emission Sources:
Other sources of air pollution in the Crockett area include pollution from marine vessel activity and neighborhood scale sources such as service stations.

Monitoring Parameters:
Dioxin-like compounds that will be monitored for CADAMP include dioxins, furans and congener specific PCBs. A total of 31 compounds will be evaluated each month. Meteorological parameters will include wind speed, wind direction, ambient temperature and relative humidity.

Monitoring Schedule:
The dioxin sampler will be run for 28 consecutive days each month for the duration of the project. Quartz fiber filters and polyurethane foam (PUFs) comprise the sampling media. Filters will be collected and replaced every 6th day. PUFs will be collected on the 28th day. Filters and PUFs will be composited for a single monthly sample analysis. Meteorological data will be collected continuously.

Anticipated End Date:
The ARB anticipates that ambient air monitoring will end at John Swett High School after December 2003.

Agencies/Resources/Roles:
The ARB is the lead agency for the California Ambient Dioxin Air Monitoring and has overall responsibility for the project. The Bay Area Air Quality Management District (BAAQMD) provided assistance in selecting the John Swett High School station and will perform all routine sample collection tasks. A laboratory under contract to the ARB will perform analysis of samples collected at the school. Staff in the ARB Monitoring and Laboratory Division, Quality Management Branch (Operations Planning and Assessment Section) will have the lead role in coordinating sampling, tracking the project, validating the data, conducting quality control and quality assurance activities and writing the quarterly reports. ARB's Stationary Source Division (SSD) will evaluate ambient concentrations to prioritize risk management strategies. Data will be shared with the U.S. EPA and the BAAQMD.

Connection to Other Air Resources Board Programs:
In addition to providing data necessary to determine ambient dioxin, furan and PCB concentrations for CADAMP, monitoring at John Swett High School will be conducted for the Children's Environmental Health Protection Program under SB 25 (http://www.arb.ca.gov/ch/programs/sb25/index.htm). This monitoring will address the exposure of children to criteria pollutants, non-methane hydrocarbons (NMHC), and air toxics. Data collected at John Swett High School will also be used to support the ARB's Community Health Program (http://www.arb.ca.gov/ch/ch.htm) and will provide information for the ARB's ongoing efforts to mitigate the health risks from diesel particulate (http://www.arb.ca.gov/diesel/background.htm). The Planning and Technical Support Division of ARB is coordinating the Community Health Program and will use the data generated at the school monitoring station to support other Community Health studies currently under development. Public outreach for the Community Health Program is being coordinated by the Planning and Technical Support Division.

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